UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF ALLOWANCE AND FEE(S) DUE

68998	7590	11/12/2008

WILMERHALE / RED HAT, INC.
60 STATE STREET
BOSTON, MA 02109

EXAMINER
DENG, ANNA CHEN

ART UNIT	PAPER NUMBER
2191	

DATE MAILED: 11/12/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,921	09/26/2003	David Woodhouse	0113715.00142US1	9463

TITLE OF INVENTION: SOFTWARE AND DATA FILE UPDATING PROCESS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	02/12/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u> Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

68998   7590   11/12/2008

WILMERHALE / RED HAT, INC.
60 STATE STREET
BOSTON, MA 02109

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,921	09/26/2003	David Woodhouse	0113715.00142US1	9463

TITLE OF INVENTION: SOFTWARE AND DATA FILE UPDATING PROCESS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	02/12/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
DENG, ANNA CHEN	2191	717-100000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE   (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
❑ Issue Fee
❑ Publication Fee (No small entity discount permitted)
❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)
❑ A check is enclosed.
❑ Payment by credit card. Form PTO-2038 is attached.
❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.   OMB 0651-0033   U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,921	09/26/2003	David Woodhouse	0113715.00142US1	9463

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DENG, ANNA CHEN

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2191	

DATE MAILED: 11/12/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 235 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 235 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/672,921	WOODHOUSE, DAVID
	Examiner	Art Unit
	ANNA DENG	2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *7/31/2008*.

2. ☒ The allowed claim(s) is/are *1-6,8-11,14-19 and 21-23*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some*   c) ☐ None of the:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .
    (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date 20081104.
    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)
1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____ .

DETAILED ACTION

1.   This action is in response to amendment filed on 7/31/2008.

2.   The rejection under 35 U.S.C. 112, first paragraph to claims 11-14, 19,

and 21-23 is withdrawn in view of applicant's amendment.

3.   The rejection under 35 U.S.C. 112, second paragraph to claims 11-14, 19,

and 21-23 is withdrawn in view of applicant's amendment.

4.   The rejection under 35 U.S.C. 102 (b) as being anticipated by Andrew

Tridgell ("Efficient Algorithms for sorting and Synchronization") to claims 1-3,5, 7-

9, 11-13, 15-16, 18-20, and 21-23 is withdrawn in view of applicant's

amendment.

5.   The rejection under 35 U.S.C. 103 (a) as being unpatentable over Andrew

Tridgell ("Efficient Algorithms for sorting and Synchronization") to claims 4, 6, and

17 is withdrawn in view of applicant's amendment.

6.   Claims 1-6, 8-11, 14-15, 19, and 21-23 have been amendment (see

Examiner's Amendment below).

7.   Claims 1-6, 8-11, 14-19, and 21-23 are pending.

8.   Claims 1-6, 8-11, 14-19, and 21-23 are allowed.

Drawings

9.   The following changes to the drawings have been approved by the

examiner and agreed upon by applicant: in FIG. 2, replace label "310" to –210--,

replace label "320' to --220--. In order to avoid abandonment of the application,

applicant must make these above agreed upon drawing changes.

EXAMINER'S AMENDMENT

10.   An examiner's amendment to the record appears below. Should the

changes and/or additions be unacceptable to applicant, an amendment may be

filed as provided by 37 CFR 1.312. To ensure consideration of such an

amendment, it MUST be submitted no later than the payment of the issue fee.

        Authorization for this examiner's amendment was given in a telephone

interview with Ronald R. Demsher (Reg. No. 42,478) on 10/30/2008 to place the

application in condition for allowance.

        The application has been amended as follows:

In the claims:

        Claims 12 and 13 have been canceled.

        Claims 1-6, 8-11, 14-15, 19, and 21-23 have been replaced as following:

1.   (Currently amended) A computer-implemented method for updating a

seed file to match a target file, said method comprising:

        separating said target file into a header portion and a target file payload;

        generating target file checking data for one or more blocks of said target

file payload, wherein the generating includes, for each of the one or more blocks

of said target file payload, retrieving the block from memory, decompressing the

block of said target file payload, and calculating file checking data based on the

decompressed block of said target file payload;

storing at least a portion of said target file checking data in a cache,

wherein the cache is part of a non-volatile storage device;

receiving seed file checking data corresponding to one or more blocks of

said seed file, wherein said seed file checking data is based on a decompressed

version of the one or more blocks of said seed file;

comparing said seed file checking data with said target file checking data

to identify differences in blocks of said seed file and blocks of said target file; and

transmitting information for revising seed file blocks which are different

from target file blocks such that said seed file blocks match said target file blocks.

2.   (Currently amended) The computer-implemented method of claim 1,

wherein said target file checking data and said seed file checking data each

comprise weak level checking data and strong level checking data, and wherein

said comparing comprises comparing said weak level checking data and next

comparing strong level checking data only if a match is identified in said weak

level checking data.

3.   (Currently amended) The computer-implemented method of claim 1,

wherein said target file checking data and said seed file checking data each

comprise a 32-bit checksum and a 128-bit checksum.

4.   (Currently amended) The computer-implemented method of claim 1,

wherein said target file checking data and said seed file checking data each

comprise weak level checking data and strong level checking data, and wherein

said storing comprises storing said weak level checking data associated with said

target file and storing only said strong level checking data associated with said

target file expected to match strong level checking data associated with said

seed file.

5.   (Currently amended) The computer-implemented method of claim 1,

wherein said target file checking data and said seed file checking data each

comprise a checksum.

6.   (Currently amended) The computer-implemented method of claim 1,

wherein said target file checking data stored in a cache are used with multiple

updating requests received from a plurality of clients.

8.   (Currently amended) The computer-implemented method of claim 1,

wherein said seed file is decompressed prior to said generating, wherein said

seed file blocks are revised in accordance with said transmitted information to

match said target file blocks, and wherein said revised seed file blocks are

recompressed after revising.

9.   (Currently amended) The computer-implemented method of claim 8,

wherein said seed file comprises a compressed payload, previously separated

from a compound file, and wherein said revised seed file is appended to a

header file after said recompressing to constitute a revised compound file.

10.   (Currently amended) The computer-implemented method of claim 9,

wherein said compound file and said revised compound file comport with an

RPM Package Manager format.

11.   (Currently amendment) A computer-implemented method for updating a

seed file to match a target file, wherein said seed file comprises a compressed

payload, previously separated from a compound file, said method comprising:

        constructing said seed file to maximize similarities with said target file;

        decompressing said seed file;

        generating seed file checking data for one or more blocks of said seed file,

wherein said seed file checking data is based on a decompressed version of the

one of the one or more blocks of said seed file;

        transmitting said seed file checking data for comparison against cached

target file checking data corresponding to one or more blocks of said target file to

identify differences in blocks of said seed file and blocks of said target file,

wherein the cached target file checking data is cached in a cache that is part of a

non-volatile storage device; and

        receiving information for revising seed file blocks which are different from

target file blocks such that said seed file blocks match said target file blocks;

        revising said seed file blocks in accordance with said information to match

said target file blocks;

recompressing said revised seed file blocks, and

appending said revised seed file blocks to a header file after said

recompressing to constitute a revised compound file.

12.   (Canceled).

13.   (Canceled).

14.   (Currently amended) The computer-implemented method of claim 1311,

wherein said compound file and said revised compound file comport with an

RPM Package Manager format.

15.   (Currently amended) A computer program product, residing on a

computer-readable medium, for use in updating a seed file to match a target file,

said computer program product comprising instructions for causing a computer

to:

separate said target file into a header portion and a target file payload;

decompress said target file payload

generate target file checking data for one or more blocks of said target file

payload, wherein the generating includes, for each of the one or more blocks of

said target file payload, retrieving the block from memory, decompressing the

block of said target file payload, and calculating file checking data based on the

decompressed block of said target file payload;

store at least a portion of said target file checking data in a cache, wherein

the cache is part of a non-volatile storage device;

receive seed file checking data corresponding to one or more blocks of

said seed file;

compare said seed file checking data with said target file checking data to

identify differences in blocks of said seed file and blocks of said target file; and

transmit information for revising seed file blocks which are different from

target file blocks such that said seed file blocks match said target file blocks.

19.   (Currently amended) A computer program product, residing on a

computer-readable medium, for use in updating a seed file to match a target file,

<u>wherein said seed file comprises a compressed payload, previously separated</u>

<u>from a compound file,</u> said computer program product comprising instructions for

causing a computer to:

construct said seed file to maximize similarities with said target file;

<u>decompress said seed file;</u>

generate seed file checking data for one or more blocks of said seed file;

transmit said seed file checking data for comparison against cached target

file checking data corresponding to one or more blocks of said target file to

identify differences in blocks of said seed file and blocks of said target file,

wherein the cached target file checking data is cached in a cache that is part of a

non-volatile storage device; and

receive information for revising seed file blocks which are different from

target file blocks such that said seed file blocks match said target file blocks;

revise said seed file blocks in accordance with said information to match

said target file blocks;

recompress said revised seed file blocks, and

append said revised seed file blocks to a header file after said

recompressing to constitute a revised compound file.

21.   (Currently amended) The computer-implemented method of claim 11,

wherein said step of constructing said seed file utilizes data that is locally stored.

22.   (Currently amended) The computer-implemented method of claim 21,

wherein said seed file is a compound file comprising existing versions of

individual files.

23.   (Currently amended) A system for updating a seed file to match a target

file, wherein said seed file comprises a compressed payload, previously

separated from a compound file, said system comprising:

a client computer that ~~generates a~~ constructs said seed file ~~constructed~~ to

maximize similarities with said target file, ~~and that~~ (ii) decompresses said seed

file, and (iii) generates seed file checking data corresponding to one or more

blocks of said seed file;

a server that generates target file checking data for one or more blocks of

said target file, receives said seed file checking data, compares said seed file

checking data with said target file checking data to identify differences in blocks

of said seed file and blocks of said target file and transmits information to said

client computer for revising seed file blocks which are different from target file

blocks such that said seed file blocks match said target file blocks; and

a non-volatile storage device associated with said server to store at least a

portion of said target file checking data in a cache;

wherein the client computer (i) receives the information for revising seed

file blocks, (ii) revises said seed file blocks in accordance with said information to

match said target file blocks; (iii) recompresses said revised seed file blocks, and

(iv) appends said revised seed file blocks to a header file after said

recompressing to constitute a revised compound file.

REASONS FOR ALLOWANCE

11.   The following is an examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach generating

target file checking data for one or more blocks of said target file payload,

wherein the generating includes, for each of the one or more blocks of said target

file payload, retrieving the block from memory, decompressing the block of said

target file payload, and calculating file checking data based on the

decompressed block of said target file payload; storing at least a portion of said

target file checking data in a cache, wherein the cache is part of a non-volatile

storage device; receiving seed file checking data corresponding to one or more

blocks of said seed file, wherein said seed file checking data is based on a

decompressed version of the one or more blocks of said seed file; comparing

said seed file checking data with said target file checking data to identify

differences in blocks of said seed file and blocks of said target file; and

transmitting information for revising seed file blocks which are different from

target file blocks such that said seed file blocks match said target file blocks as

recited in independent claims 1 and 15; and generating seed file checking data

for one or more blocks of said seed file, wherein said seed file checking data is

based on a decompressed version of the one of the one or more blocks of said

seed file; transmitting said seed file checking data for comparison against cached

target file checking data corresponding to one or more blocks of said target file to

identify differences in blocks of said seed file and blocks of said target file,

wherein the cached target file checking data is cached in a cache that is part of a

non-volatile storage device; and receiving information for revising seed file blocks

which are different from target file blocks such that said seed file blocks match

said target file blocks; revising said seed file blocks in accordance with said

information to match said target file blocks; recompressing said revised seed file

blocks, and appending said revised seed file blocks to a header file after said

recompressing to constitute a revised compound file as recite in independent

claims 11, 19 and 23.

The closed cited prior art, Andrew Tridgell ("Efficient Algorithms for sorting

and Synchronization"), teaches a method for updating a seed file to match a

target file. However, Tridgell fails to teach generating target file checking data for

one or more blocks of said target file payload, wherein the generating includes,

for each of the one or more blocks of said target file payload, retrieving the block

from memory, decompressing the block of said target file payload, and

calculating file checking data based on the decompressed block of said target file

payload; receiving seed file checking data corresponding to one or more blocks

of said seed file, wherein said seed file checking data is based on a

decompressed version of the one or more blocks of said seed file; comparing

said seed file checking data with said target file checking data to identify

differences in blocks of said seed file and blocks of said target file; and

transmitting information for revising seed file blocks which are different from

target file blocks such that said seed file blocks match said target file blocks as

recited in independent claims 1 and 15; and generating seed file checking data

for one or more blocks of said seed file, wherein said seed file checking data is

based on a decompressed version of the one of the one or more blocks of said

seed file; transmitting said seed file checking data for comparison against cached

target file checking data corresponding to one or more blocks of said target file to

identify differences in blocks of said seed file and blocks of said target file,

wherein the cached target file checking data is cached in a cache that is part of a

non-volatile storage device; and receiving information for revising seed file blocks

which are different from target file blocks such that said seed file blocks match

said target file blocks; revising said seed file blocks in accordance with said

information to match said target file blocks; recompressing said revised seed file

blocks, and appending said revised seed file blocks to a header file after said

recompressing to constitute a revised compound file as recite in independent

claims 11, 19 and 23.

These claimed limitations are not present in the prior art of record and

would not have been obvious. Thus all pending claims 1-6, 8-11, 14-19, and 21-

23 are allowed.

Any comments considered necessary by applicant must be submitted no

later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."

Conclusion

12.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Anna Deng whose telephone number is 571-272-

5989. The examiner can normally be reached on Mondays to Fridays 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anna Deng/

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191